

KNOWLEDGE OF NUTRITION - HEALTH REPRODUCTION AND ITS ASSOCIATION WITH RISKY BEHAVIOR AMONG 15-19 YEARS OLD ADOLESCENTS

Rosa Susanti¹⁾, Okta Zenita Siti Fatimah²⁾

Email: rosasusanti36@gmail.com¹⁾, oktazenitasiti@gmail.com²⁾

^{1,2)} Bachelor of Midwifery Program at STIKES Bhakti Pertiwi Indonesia, 37th Raya Jagakarsa Street, South Jakarta, DKI Jakarta, Indonesia

Article Information

Received:

November 06, 2023

Revised:

April 03, 2024

Accepted:

May 14, 2024

Abstract

This study aims to describe the relationship between knowledge of balanced nutrition and reproductive health among adolescents and their engagement in risky behaviors. The research method used was a survey conducted with a randomly selected group of adolescents aged 15-19 years. The results indicated that most adolescents have limited knowledge of balanced nutrition and reproductive health. However, the findings also showed a positive relationship between knowledge of balanced nutrition and healthy eating behaviors, while a negative relationship was found between knowledge of balanced nutrition and risky behaviors such as the consumption of fast food and alcoholic beverages. Knowledge of reproductive health also proved to be significant, with adolescents possessing better knowledge being more likely to avoid risky reproductive health behaviors, such as unprotected sex. In conclusion, this study provides insights into the importance of knowledge about balanced nutrition and reproductive health in shaping adolescent behaviors and highlights the need to enhance their understanding through appropriate educational programs and interventions.

Keywords: Knowledge of Balanced Nutrition, Reproductive Health, Behavior, Adolescents

@2024PoliteknikHarapanBersama

Correspondence:

Okta Zenita Siti Fatimah, Bachelor of Midwifery Program at STIKES Bhakti Pertiwi Indonesia, 37th Raya Jagakarsa Street, South Jakarta, DKI Jakarta, Indonesia, okta.zenita@gmail.com

1. Introduction

Obesity is a condition characterized by an excess accumulation of body fat that can adversely affect health. It diminishes life expectancy and exacerbates health issues. Obesity in adolescents is associated with a higher risk of obesity in adulthood, which can trigger various non-communicable diseases. Factors influencing obesity include gender, age, residential region, and dietary habits (such as intake of simple sugars, fats, proteins, fruits, and vegetables). According to RISKESDAS, the prevalence of obesity in Indonesian

adults surged from 14% to 21.8% between 2013 and 2018, with adolescent obesity aged 13-15 years reaching 4.8% in 2018 [1].

Agnesia's research findings revealed that 4% of participants were classified as obese, 21% as overweight, and 12% as underweight. Based on the respondents' knowledge of nutrition, an improvement subsequent to educational intervention, notably with the proportion exhibiting excellent knowledge rising from 28% to 38%. Moreover, regarding attitudes towards adhering to balanced nutrition guidelines, a significant

majority, precisely 58% of respondents, were classified as having poor adherence. The study also noted that 58% of respondents demonstrated poor behavior in implementing the four pillars of nutrition in maintaining ideal body weight [2].

Meanwhile, Aulia's study (2021) indicated a significant relationship between nutrition knowledge, energy intake, nutritional status, and respondents' attitudes [3]. Fatmami et al.'s study (2022) found that 57.6% of respondents exhibited a normal nutritional status [4].

Premarital sexual activity among adolescents strongly correlates with teenage pregnancy and the transmission of STDs. Data from the 2007 DHS revealed a higher prevalence of premarital sex among males, while the 2012 DHS data suggested an increasing trend, particularly among females aged 15-19 [5].

MA AL-IHSAN, located in Bekasi village, Pondok Gede subdistrict, is a high school with approximately 100 students. Established in 2008 by the Al-Ihsan Islamic Education and Da'wah Foundation, the school holds a B accreditation status. Its vision is to be a leading Madrasah Aliyah in religion, science, and technology, aiming to instill religious values, advance science and technology, and optimize human resource potential.

This school has 17 teachers, two staff, two cleaning staff, and two security staff. An interview with a teacher from MA-Alihsan revealed that most students lack adequate understanding of a balanced nutrition, smoking, the risks associated with drugs, sexual violence, and HIV/AIDS. Additionally, students tend to partake in risky behaviors like excessive cell phone use late at night, staying up to play games on electronic devices, unhealthy eating practices, excessive television watching, and misuse of sedatives.

Adolescence is a crucial period for individuals to maintain good physical and mental health and receive a quality education. Adolescents play a significant

role in national development. Indonesia has around 67 million adolescents aged 10-24 years, accounting for 24% of the total population. The National Population and Family Planning Agency (BKKBN) focuses on enhancing maternal and reproductive health by prioritizing programs that educate adolescents and provide them access to reproductive health services [6]. Research conducted by Fatmawati in 2022 revealed that 65.2% of respondents had limited knowledge about reproductive health [4]. This study explored the association between knowledge of a balanced diet and reproductive health among adolescents in demonstrating risky behaviors.

2. Method

The survey approach was utilized as the research methodology in this study. It fell under descriptive research aimed at portraying adolescents' understanding of balanced nutrition, reproductive health, and risky behavior. The study encompassed adolescents aged 15-19 years. Data gathering involved interviewing a sample of adolescents selected randomly from this demographic. Subsequent data analysis employed descriptive statistical techniques to capture a holistic view of adolescents' knowledge and behaviors concerning balanced nutrition, reproductive health, and potentially risky behaviors.

3. Results and Discussion

Analysis 1: The Concept of Balanced Nutrition and its Implementation. Balanced nutrition implies a daily dietary plan encompassing the requisite types and quantities of nutrients for individuals. The execution of this notion has progressed from "Tumpeng Gizi Seimbang" to "Piring Makanku," advocating the intake of vegetables and fruits. A survey revealed that 95.2% of participants acknowledged the significance of a nutritionally balanced diet in determining present and future health. Furthermore, 83.3% agreed that an apt plate comprises 50%

vegetables and fruits and 50% carbohydrates and proteins, ensuring the body receives vital nutrients for optimal operation.

Analysis 2: The Significance of Fruits and Vegetables in a Balanced Diet. Fruits and vegetables are crucial sources of vitamins, minerals, and fiber for maintaining bodily equilibrium and warding off illnesses. Even though some view these food groups as dispensable, data underscores the importance of their sufficient consumption. All respondents recognized fruits and vegetables' indispensable role in regulating bodily functions, emphasizing the equilibrium among various food categories; an ideal adult's meal portion should entail one-third of staple foods, one-third of vegetables, one-sixth of fruits, and one-sixth of side dishes.

Analysis 3: Nutritional Requirements Across Age and Gender. Nutritional demands vary depending on age, gender, and physical activity. Studies indicate that 61.9% of adults grasp their nutritional requisites based on these criteria. Among adolescents, 45.2% acknowledged the necessity of specific nutrient requirements, encompassing a diverse diet, regular physical activity, a hydrated state with at least eight glasses of water daily, consistent breakfast consumption, and the inclusion of fruits and vegetables. Adhering to these principles is critical in fostering optimal adolescent growth and development.

Analysis 4: Impact of Diet on the Immune System. A well-rounded diet plays a crucial role in the body's functions, especially the immune system that defends against illnesses. 95.2% of participants acknowledged the influence of a balanced diet on immune strength, indicating a strong awareness of the diet's significance in health maintenance and disease prevention. Foods rich in carbohydrates, vitamins, minerals, fiber, and diverse protein sources like rice, vegetables, fruits, and side dishes are essential for bolstering the immune system.

Analysis 5: Impact of Reproductive Health and Nutrition Balance. Nutritional status strongly influences reproductive health. 88.1% of respondents acknowledged that reproductive health encompasses physical, mental, and social well-being. Factors like unintended pregnancy, unsafe abortion, and sexually transmitted diseases can be associated with poor nutritional status. The survey revealed that 76.2% of respondents identified reproductive health issues associated with nutrition, mental health, economics, and gender inequality. This highlights the significance of a balanced diet for physical health, reproductive health, and overall well-being.

The significance of balanced nutrition lies in the distinct roles different nutrients play in the body, such as carbohydrates for energy, proteins for tissue growth and repair, fats for organ function maintenance, and vitamins and minerals for various biological functions. Consuming a balanced diet is a crucial step in sustaining long-term health and can aid in preventing diseases linked to an imbalanced diet. Adolescence signifies the shift from childhood to adulthood and is a critical period to focus on. Their ultimate development is heavily influenced by the balanced diet they receive during this phase [7]. The outcomes of health education initiatives indicated a high level of interest, demonstrated by the respondents' positive response to receiving materials on adolescent nutrition and sexual health education and their readiness to ask questions. This enthusiasm among respondents is expected to enhance students' comprehension of the importance of balanced nutrition and sexual health [8].

Adequate intake of fruits and vegetables helps strengthen the immune system, maintain a healthy weight, and prevent several chronic diseases, including obesity, diabetes, and heart disease. Previous research shows that educating children about the need for a balanced, nutrient-rich diet that includes

iron can help reduce the prevalence of anemia in adolescents [9].

Reproductive health is a crucial aspect of adolescent life. A sound understanding of reproductive health can aid adolescents in making informed decisions regarding sexual relationships, protection against sexually transmitted diseases, and future family planning. A proper grasp of balanced nutrition and reproductive health can assist adolescents in steering clear of risky behaviors, like consuming unhealthy foods or engaging in unsafe sexual activities. Therefore, educating adolescents about the importance of consuming fruits and vegetables and maintaining reproductive health is vital in ensuring a healthy and quality adolescence. Adolescents know girls require increased iron intake due to their monthly menstrual cycle. Respondents also recognized that adolescent boys need more calories than girls during their growth years [10].

The concept of "Tumpeng Gizi Seimbang" has influenced the development of more modern dietary guidelines like "Piring Makanku" and "Sajian Sekali Makan." "Piring Makanku" visually represents a balanced diet, suggesting that meals should include vegetables, fruits, proteins, carbohydrates, and fats in balanced portions. Adequate nutrition is crucial for adolescents' physical and mental development, particularly in reproductive health. Consuming fruits and vegetables provides essential nutrients like vitamins, minerals, and fiber for growth and reproductive health. Specific nutrients such as folic acid, iron, and calcium directly impact adolescents' reproductive systems. Risky behaviors like smoking and unsafe sex can also affect reproductive health. Understanding the importance of a balanced diet can help adolescents maintain optimal body conditions for a healthy reproductive system and reduce the risk of future fertility issues. Failure to address malnutrition and reproductive health problems can lead to growth and

development issues in adolescents, affecting their learning motivation [11].

A balanced diet is key to maintaining a healthy body and immune system, which defends against diseases. Good nutrition supports optimal immune function, highlighting the importance of nutrition, especially for adolescent reproductive health. Proper nutrition supports healthy physical and mental development during adolescence, including reproductive development. Unhealthy habits like poor diet choices and smoking can impact reproductive health. Consuming too much fast food high in fat and sugar can disrupt nutritional balance and increase reproductive health risks. Nutrition affects physical growth, menstruation, and reproductive development, particularly in adolescent girls who require proper nutrition for energy and development [12].

A balanced diet comprising 50% fruits and vegetables alongside 50% carbohydrates and protein is vital for adolescent health, particularly concerning reproductive health and risky behaviors. Fruits and vegetables offer essential nutrients for overall health, while carbohydrates and protein provide energy for growth and development [13]. Proper nutrition can help avoid nutritional deficiencies that impact growth, development, and reproductive health. Reproductive health education is crucial for adolescents to increase awareness and optimize reproductive health programs in schools [14].

Various factors like nutrition, mental health, economics, and gender inequality influence adolescents' reproductive health. A clean and balanced diet can help prevent nutritional and reproductive health issues during the menstrual cycle. Adolescents must prioritize their health as they undergo rapid growth and development, requiring energy for physical activities [15]. A balanced diet is crucial for reproductive health, as nutritional deficiencies can affect reproductive organ development and pregnancy outcomes. A balanced diet

supports the adolescent reproductive system and mental health, which is crucial in preventing risky behaviors that can harm reproductive health. Stress, depression, and mental disorders can negatively affect reproductive health and lead to risky behaviors. Gender inequality can limit access to reproductive health information and services, increasing the risk of early marriage and teenage pregnancy. Training health cadres can increase adolescent reproductive health and nutrition awareness, empowering high school students to educate their peers [16].

Obesity (overweight) and underweight can significantly impact male fertility, as well as the understanding of balanced nutrition and reproductive health among adolescents engaging in risky behaviors. Obesity influences a woman's ability to conceive through heightened insulin and leptin levels, impacting ovarian steroidogenesis [17]. Nutritional deficiencies or an imbalanced diet can detrimentally affect sperm production, reproductive hormones, and sperm quality. Recognizing the nutritional requirements for supporting male reproductive function is crucial for optimal reproductive health. Many remain unaware of the correlation between menstrual irregularities and obesity or that irregular periods can signal underlying reproductive system disorders [18].

Understanding balanced nutrition and reproductive health alongside risky behaviors in adolescents is paramount. Educating adolescents about reproductive health is vital, yet many parents lack comprehension and hold opposing views on adolescent reproductive health [19].

4. Conclusion

The study findings highlight a significant association between knowledge of balanced nutrition, adolescent reproductive health, and risky behavior. Adolescents with better nutritional knowledge tend to exhibit healthier eating habits. Furthermore, understanding reproductive health

contributes to promoting safe sexual behaviors. This underscores the importance of nutrition and reproductive health education in mitigating adolescent risky behaviors. Therefore, developing educational initiatives that enhance adolescents' comprehension of these aspects is imperative, enabling them to make healthier choices and assume responsibility for their well-being.

5. Acknowledgment

This study would not have been possible without the support and contribution of various parties who offered significant help. We express gratitude to individuals, families, friends, and adolescents who participated as research subjects and shared valuable information. Additionally, we appreciate the insights and guidance from reproductive health and nutrition experts and the support from educational and research institutions—special thanks to those who provided financial and logistical support, facilities, and infrastructure. Gratitude is also extended to supervisors and the research team for their guidance, criticism, and input in developing this research. All these contributions facilitated the completion of this study, and we are thankful for the assistance and support provided.

6. References

- [1] G. R. Suha and A. Rosyada, "Faktor-faktor yang berhubungan dengan kejadian obesitas pada remaja umur 13–15 tahun di Indonesia (analisis lanjut data Riskesdas 2018)," *Ilmu Gizi Indones.*, vol. 6, no. 1, p. 43, 2022.
- [2] D. Agnesia, "Peran Pendidikan Gizi Dalam Meningkatkan Pengetahuan, Sikap Dan Perilaku Gizi Seimbang Pada Remaja Di Sma Yasnu Kecamatan Manyar Kabupaten Gresik," *Acad. ACTION J. Community Empower.*, vol. 1, no. 2, p. 64, 2020.
- [3] N. R. Aulia, "Peran Pengetahuan Gizi Terhadap Asupan Energi, Status Gizi Dan Sikap Tentang

- Gizi Remaja,” *J. Ilm. Gizi dan Kesehat.*, vol. 2, no. 02, pp. 31–35, 2021.
- [4] T. Y. Fatmawati, N. Efni, and F. Chandra, “Status Gizi dan Pengetahuan Kesehatan Reproduksi terhadap Pemanfaatan Pusat Informasi dan Konseling Remaja (PIK-R),” *J. Akad. Baiturrahim Jambi*, vol. 11, no. 2, p. 243, 2022.
- [5] Pusdatin, “Infodatin Reproduksi Remaja-Ed.Pdf,” *Situasi Kesehatan Reproduksi Remaja*. p. 1, 2017.
- [6] B. U. B. K. dan K. B. N. (BKKBN) Humas, “No Title,” 2021.
- [7] A. Wigati and A. Z. Nisak, “Pentingnya Edukasi Gizi Seimbang bagi Kesehatan Reproduksi Remaja,” *J. Abdimas Indones.*, vol. 4, pp. 85–90, 2022.
- [8] I. Baroroh, H. Prajayanti, M. A. Sma, and M. Ali, “Pendidikan Kesehatan tentang Sosialisasi Kesehatan Remaja tentang Gizi dan Seksual di MTS Yapensa Jenggol Kota Pekalongan rentang usia 10-18 tahun dan berencana Indonesia menurut Sensus Penduduk Masa remaja merupakan periode terjadinya pertumbuhan dan fis,” vol. 1, no. 1, pp. 19–22, 2020.
- [9] K. Khobibah, T. Nurhidayati, M. Ruspita, and B. Astyandini, “Anemia Remaja Dan Kesehatan Reproduksi,” *J. Pengabd. Masy. Kebidanan*, vol. 3, no. 2, p. 11, 2021.
- [10] S. Mareti and I. Nurasa, “Tingkat Pengetahuan Remaja Tentang Kesehatan Reproduksi Di Kota Pangkalpinang,” *J. Keperawatan Sriwij.*, vol. 9, no. 2, pp. 25–32, 2022.
- [11] V. Veftisia, L. D. Afriyani, and E. Salafas, “Pengabdian Masyarakat SMPN 4 Ungaran Pelatihan Kader Kesehatan Remaja Tentang Status Gizi Remaja Dan Deteksi Dini Masalah Kesehatan Reproduksi Remaja,” *J. Pengabd. Dharma Bakti*, vol. 3, no. 1, p. 49, 2020.
- [12] K. K. Mandenas, “Pengaruh Pendidikan Kesehatan Melalui Video,” vol. X, pp. 1–8, 2020.
- [13] U. Chapsah *et al.*, “Edukasi Kesehatan Reproduksi Sebagai Upaya Pencegahan Risiko Reproduksi Remaja,” *J. Community Empower.*, vol. 1, no. 2, pp. 82–87, 2022.
- [14] A. Hanif, M. Noviana, S. Malik, and I. Harahap, “EDUKASI KESEHATAN UNTUK MENINGKATKAN KESEHATAN REPRODUKSI REMAJA,” *PREPOTIF J. Kesehat. Masy.*, vol. 7, pp. 16169–16177, 2023.
- [15] B. Barir, Z. Fatmawati, and I. Aini, “EDUKASI KESEHATAN GIZI SEIMBANG DAN MANAJEMEN KEBERSIHAN MENSTRUASI (MKM) PADA REMAJA PUTRI DI DESA JOMBANG,” vol. 1, pp. 36–41, 2023.
- [16] V. Veftisia, L. Dian A, and W. Kristiningrum, “Pelatihan Pendidik Sebaya Tentang Status Gizi dan Masalah Kesehatan Reproduksi Remaja di SMA N 1 Donorojo Jepara,” *Indones. J. Community Empower.*, vol. 4, no. 1, p. 13, 2022.
- [17] Sugiharto, “OBESITAS DAN KESEHATAN REPRODUKSI WANITA,” *J. Kesehat. Masy.*, vol. 11, no. 1, pp. 87–95, 2013.
- [18] A. Wahyuni, A. Wahyuni, F. E. Cahyani, and S. N. Amalya, “Upaya Peningkatan Kesehatan Reproduksi Melalui Deteksi Dini Dan Pencegahan Gangguan Haid Serta Menopause,” *SELAPARANG J. Pengabd. Masy. Berkemajuan*, vol. 6, no. 3, p. 1164, 2022.
- [19] D. Widiyastuti and L. Nurcahyani, “Pengaruh Sapa Orangtua Remaja Terhadap Pengetahuan, Sikap dan Perilaku Oangtua tentang Pendidikan Kesehatan Reproduksi,” *J. Kesehat. Reproduksi*, vol. 6, no. 3, p. 93, 2019.